IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A method of encoding an audio signal, the audio signal ~~including~~ comprising a first audio channel and a second audio channel, the method comprising ~~the steps of~~:

subband filtering each of the first audio channel and the second audio channel in a complex modulated filterbank to provide a first plurality of subband signals for the first audio channel and a second plurality of subband signals for the second audio channel~~,~~ ;

downsampling each of the subband signals to provide a first plurality of downsampled subband signals and a second plurality of downsampled subband signals~~,~~;

further subband filtering at least one of the downsampled subband signals in a further filterbank in order to provide a plurality of sub-subband signals, wherein a number of downsampled subband signals subjected to the further subband filtering is smaller than a total number of downsampled subband signals so that downsampled subband signals that are not further subband filtered remain;

deriving spatial parameters from the sub-subband signals and from ~~those~~ the downsampled subband signals that are not further subband filtered~~,~~ ; and

deriving a single channel audio signal comprising derived subband signals derived from the first plurality of downsampled

subband signals and the second plurality of downsampled subband signals.

2. (Currently Amended) ~~A~~ The method as claimed in claim 1, wherein for each subband that is further subband filtered, the sub-subband signals are added together after scaling and/or phase rotation to form a new subband signal, and wherein the single channel audio signal is derived from these new subband signals and the downsampled subband signals that are not further filtered.

3. (Currently Amended) ~~A~~ The method as claimed in claim 1, wherein the further subband filtering is performed on at least the lowest frequency subband signal of the first plurality of downsampled subband signals and on the lowest frequency subband signal of the second plurality of downsampled subband signals.

4. (Currently Amended) ~~A~~ The method as claimed in claim 3, wherein the further subband filtering is further performed on at least the next lowest frequency subband signal of the first plurality of downsampled subband signals and on the next lowest frequency subband signal of the second plurality of downsampled subband signals.

5. (Currently Amended) ~~A~~ The method as claimed in claim 4, wherein the number of sub-subbands in the lowest frequency subband

signals is higher than the number of sub-subbands in the next lowest frequency subband signals.

6. (Currently Amended) ~~A~~ The method as claimed in claim 1, wherein the further subband filterbank is at least partially a complex modulated filter bank.

7. (Currently Amended) ~~A~~ The method as claimed in claim 1, wherein the further subband filterbank is at least partially a real valued cosine modulated filter bank.

8. (Currently Amended) ~~A~~ The method as claimed in claim 1, wherein the further subband filter bank is an oddly stacked filter bank.

9. (Currently Amended) ~~A~~ The method as claimed in claim 1, wherein the sub-subband signals are not further downsampled.

10. (Currently Amended) ~~A~~ The method as claimed in claim 1, wherein the single channel audio signal is bandwidth limited and further coded and wherein spectral band replication parameters are derived from the first plurality of downsampled subband signals and/or the second plurality of downsampled subband signals.

11. (Currently Amended) An audio encoder for encoding an audio signal, the audio signal ~~including~~ comprising a first audio channel and a second audio channel, the encoder comprising:

a first complex modulated filterbank for subband filtering the first audio channel to provide a first plurality of subband signals for the first audio channel~~,~~;

a second complex modulated filterbank for subband filtering the second audio channel to provide a second plurality of subband signals for the second audio channel~~,~~;

~~means~~ a downsampler for downsampling each of the subband signals to provide a first plurality of downsampled subband signals and a second plurality of downsampled subband signals~~,~~;

a further filterbank for further subband filtering at least one of the downsampled subband signals in order to provide a plurality of sub-subband signals, wherein a number of downsampled subband signals subjected to the further subband filtering is smaller than a total number of downsampled subband signals so that downsampled subband signals that are not further subband filtered remain;

~~means~~ a parameter extractor for deriving spatial parameters from the sub-subband signals and from ~~those~~ the downsampled subband signals that are not further subband filtered~~,~~; and

~~means~~ a downmixer for deriving a single channel audio signal comprising derived subband signals derived from the first

plurality of downsampled subband signals and the second plurality of downsampled subband signals.

12. (Currently Amended) An apparatus for transmitting or storing an encoded audio signal based on an input audio signal, the apparatus comprising:

an input unit to receive an input audio signal~~,~~;

an audio encoder as claimed in claim 11 for encoding the input audio signal to obtain an encoded audio signal~~,~~; and

a channel coder to further code the encoded audio signal into a format suitable for transmitting or storing.

13. (Currently Amended) A method of decoding an encoded audio signal, the encoded audio signal comprising an encoded single channel audio signal and a set of spatial parameters, the method of decoding comprising:

decoding the encoded single channel audio channel to obtain a plurality of downsampled subband signals~~,~~;

further subband filtering at least one of the downsampled subband signals in a further filterbank in order to provide a plurality of sub-subband signals, wherein a number of downsampled subband signals subjected to the further subband filtering is smaller than a total number of downsampled subband signals so that downsampled subband signals that are not further subband filtered remain; and

deriving two audio channels from the spatial parameters, the sub-subband signals and ~~those~~ the downsampled subband signals that are not further subband filtered.

14. (Currently Amended) ~~A~~ The method as claimed in claim 13, wherein the further subband filtering is performed on at least the lowest frequency subband signal of the plurality of downsampled subband signals.

15. (Currently Amended) ~~A~~ The method as claimed in claim 14, wherein the further subband filtering is further performed on at least the next lowest frequency subband signal of the plurality of downsampled subband signals.

16. (Currently Amended) ~~A~~ The method as claimed in claim 15, wherein the number of sub-subbands in the lowest frequency subband signals is higher than the number of sub-subbands in the next lowest frequency subband signals.

17. (Currently Amended) ~~A~~ The method as claimed in claim 13, wherein the further subband filter bank is at least partially a complex modulated filter bank.

18. (Currently Amended) ~~A~~ The method as claimed in claim 13, wherein the further subband filterbank is at least partially a real valued cosine modulated filter bank.

19. (Currently Amended) ~~A~~ The method as claimed in claim 13, wherein the further subband filter bank is an oddly stacked filter bank.

20. (Currently Amended) ~~A~~ The method as claimed in claim 13, wherein, in the lowest frequency subband, phase modifications to the sub-subband signals having a negative center-frequency in time domain are determined by taking the negative of the phase modification applied on a sub-subband signal having a positive center-frequency which is in absolute value closest to said negative center-frequency.

21. (Currently Amended) ~~A~~ The method as claimed in claim 13, wherein the encoded audio signal comprises spectral band replication parameters and wherein a high frequency component is derived from the plurality of downsampled subband signals and the spectral band replication parameters and wherein the two audio channels are derived from the spatial parameters, the sub-subband signals, ~~those~~ the downsampled subband signals that are not further subband filtered and the high frequency component.

22. (Currently Amended) An audio decoder for decoding an encoded audio signal, the encoded audio signal comprising an encoded single channel audio signal and a set of spatial parameters, the audio decoder comprising:

a decoder for decoding the encoded single channel audio channel to obtain a plurality of downsampled subband signals~~,~~;

a ~~furher~~ further filter bank for further subband filtering at least one of the downsampled subband signals in a further filterbank in order to provide a plurality of sub-subband signals, wherein a number of downsampled subband signals subjected to the further subband filtering is smaller than a total number of downsampled subband signals so that downsampled subband signals that are not further subband filtered remain; and

~~means~~ a downmixer for deriving two audio channels from the spatial parameters, the sub-subband signals and ~~those~~ the downsampled subband signals that are not further subband filtered.

23. (Currently Amended) An apparatus for reproducing an output audio signal, the apparatus comprising:

an input unit for obtaining an encoded audio signal~~,~~;

an audio decoder as claimed in claim 22 for decoding the encoded audio signal to obtain the output audio signal~~,~~; and

a reproduction unit, such as a speaker or headphone output, for reproducing the output audio signal.

24. (Currently Amended) A computer program product ~~including~~ comprising code for instructing a computer to perform ~~the steps of~~ the method as claimed in claim 1.

25. (New) A computer program product comprising code for instructing a computer to perform the method as claimed in claim 13.

26. (New) A method of encoding an audio signal, the audio signal comprising a first audio channel and a second audio channel, the method comprising:

subband filtering each of the first audio channel and the second audio channel in a complex modulated filterbank to provide a first plurality of subband signals for the first audio channel and a second plurality of subband signals for the second audio channel;

downsampling each of the subband signals to provide a first plurality of downsampled subband signals and a second plurality of downsampled subband signals;

further subband filtering at least one of the downsampled subband signals in a further filterbank in order to provide a plurality of sub-subband signals;

deriving spatial parameters from the sub-subband signals and from the downsampled subband signals that are not further subband filtered; and

deriving a single channel audio signal comprising derived subband signals derived from the first plurality of downsampled subband signals and the second plurality of downsampled subband signals,

wherein for each subband that is further subband filtered, the sub-subband signals are added together after scaling and/or phase rotation to form a new subband signal,

and wherein the single channel audio signal is derived from these new subband signals and the downsampled subband signals that are not further filtered.

27. (New) A method of decoding an encoded audio signal, the encoded audio signal comprising an encoded single channel audio signal and a set of spatial parameters, the method of decoding comprising:

decoding the encoded single channel audio channel to obtain a plurality of downsampled subband signals;

further subband filtering at least one of the downsampled subband signals in a further filterbank in order to provide a plurality of sub-subband signals; and

deriving two audio channels from the spatial parameters, the sub-subband signals and the downsampled subband signals that are not further subband filtered,

wherein, in the lowest frequency subband, phase modifications to the sub-subband signals having a negative center-frequency in time domain are determined by taking the negative of the phase modification applied on a sub-subband signal having a positive center-frequency which is in absolute value closest to said negative center-frequency.

28. (New) A method of decoding an encoded audio signal, the encoded audio signal comprising an encoded single channel audio signal and a set of spatial parameters, the method of decoding comprising:

decoding the encoded single channel audio channel to obtain a plurality of downsampled subband signals;

further subband filtering at least one of the downsampled subband signals in a further filterbank in order to provide a plurality of sub-subband signals, wherein a number of downsampled subband signals subjected to the further subband filtering is smaller than a total number of downsampled subband signals so that downsampled subband signals that are not further subband filtered remain; and

deriving two audio channels from the spatial parameters, the sub-subband signals and the downsampled subband signals that are not further subband filtered,

wherein the encoded audio signal comprises spectral band replication parameters,

wherein a high frequency component is derived from the plurality of downsampled subband signals and the spectral band replication parameters,

and wherein the two audio channels are derived from the spatial parameters, the sub-subband signals, the downsampled subband signals that are not further subband filtered and the high frequency component.